



SEQUENCE LISTING

(1) GENERAL INFORMATION:

- (i) APPLICANT: YOUNG, Andrew A.
GEDULIN, Bronislava
BEYNON, Gareth Wyn
- (ii) TITLE OF INVENTION: METHOD FOR PREVENTING GASTRITIS
USING AMYLIN OR AMYLIN
AGONISTS
- (iii) NUMBER OF SEQUENCES: 35
- (iv) CORRESPONDENCE ADDRESS:
(A) ADDRESSEE: LYON & LYON
(B) STREET: 633 WEST FIFTH STREET
(C) CITY: LOS ANGELES
(D) STATE: CALIFORNIA
(E) COUNTRY: USA
(F) ZIP: 90017
- (v) COMPUTER READABLE FORM:
(A) MEDIUM TYPE: Floppy disk
(B) COMPUTER: IBM PC compatible
(C) OPERATING SYSTEM: PC-DOS/MS-DOS
(D) SOFTWARE: PatentIn Release #1.0, Version #1.25
- a' (vi) CURRENT APPLICATION DATA:
(A) APPLICATION NUMBER: 08/851,965
(B) FILING DATE: 06-MAY-1997
(C) CLASSIFICATION: Pending
- (viii) ATTORNEY/AGENT INFORMATION:
(A) NAME: DUFT, BRADFORD J.
(B) REGISTRATION NUMBER: 32,219
(C) REFERENCE/DOCKET NUMBER: 224/042
- (ix) TELECOMMUNICATION INFORMATION:
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(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Val His Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val
20 25 30
Gly Ser Asn Thr Tyr
35

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu	Val
1				5				10						15	
His	Ser	Ser	Asn	Asn	Phe	Gly	Ala	Ile	Leu	Ser	Ser	Thr	Asn	Val	Gly
			20					25					30		
Ser	Asn	Thr	Tyr												
			35												

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

a' Cont.

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	His	Ser	Ser	Asn	Asn	Phe	Gly	Ala	Ile	Leu	Pro	Ser	Thr	Asn	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	Arg	Ser	Ser	Asn	Asn	Phe	Gly	Pro	Ile	Leu	Pro	Ser	Thr	Asn	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu	Val
1				5				10						15	
Arg	Ser	Ser	Asn	Asn	Phe	Gly	Pro	Ile	Leu	Pro	Ser	Thr	Asn	Val	Gly
			20					25					30		
Ser	Asn	Thr	Tyr												
			35												

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	His	Ser	Ser	Asn	Asn	Phe	Gly	Pro	Val	Leu	Pro	Pro	Thr	Asn	Val
				20				25					30		
Gly	Ser	Asn	Thr	Tyr											
				35											

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Val Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val
20 25 30
Gly Ser Asn Thr Tyr
35

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: peptide

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

a1 Cont.
Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val
1 5 10 15
Arg Ser Ser Asn Asn Phe Gly Pro Ile Leu Pro Pro Thr Asn Val Gly
20 25 30
Ser Asn Thr Tyr
35

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu	Val
1				5				10						15	
His	Ser	Ser	Asn	Asn	Phe	Gly	Pro	Ile	Leu	Pro	Pro	Thr	Asn	Val	Gly
			20					25					30		
Ser	Asn	Thr	Tyr												
			35												

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5				10						15	
Val	His	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Val	Leu	Pro	Pro	Thr	Asn	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Val His Ser Ser Asn Asn Leu Gly Pro Val Leu Pro Ser Thr Asn Val
 20 25 30
Gly Ser Asn Thr Tyr
 35

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu	Val
1				5				10						15	
His	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Val	Leu	Pro	Ser	Thr	Asn	Val	Gly
			20					25					30		
Ser	Asn	Thr	Tyr												
			35												

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

Cont.

Lys	Cys	Asn	Thr	Ala	Thr	Cys	Ala	Thr	Gln	Arg	Leu	Ala	Asn	Phe	Leu
1				5					10					15	
Val	Arg	Ser	Ser	Asn	Asn	Leu	Gly	Pro	Val	Leu	Pro	Ser	Thr	Asn	Val
			20					25					30		
Gly	Ser	Asn	Thr	Tyr											
			35												

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Val Arg Ser Ser Asn Asn Leu Gly Pro Ile Leu Pro Pro Thr Asn Val
20 25 30
Gly Ser Asn Thr Tyr
35

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Val Arg Ser Ser Asn Asn Leu Gly Pro Ile Leu Pro Ser Thr Asn Val
20 25 30
Gly Ser Asn Thr Tyr
35

(2) INFORMATION FOR SEQ ID NO:16:

Al
Cont.

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
(D) OTHER INFORMATION: disulfide bridge between
the Cys residues
- (B) LOCATION: 37
(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu
1 5 10 15
Ile His Ser Ser Asn Asn Leu Gly Pro Ile Leu Pro Pro Thr Asn Val
20 25 30
Gly Ser Asn Thr Tyr
35

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
(B) TYPE: amino acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- ```
(B) LOCATION: 2,7
(D) OTHER INFORMATION: disulfide bridge between
 the Cys residues
(B) LOCATION: 37
(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)
```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | His | Ser | Ser | Asn | Asn | Phe | Gly | Pro | Ile | Leu | Pro | Pro | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 1,6
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 36
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

*a1 Cont.*

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu | Ile |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| His | Ser | Ser | Asn | Asn | Leu | Gly | Pro | Ile | Leu | Pro | Pro | Thr | Asn | Val | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Arg | Ser | Ser | Asn | Asn | Leu | Gly | Ala | Ile | Leu | Ser | Ser | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Ile | Arg | Ser | Ser | Asn | Asn | Leu | Gly | Ala | Val | Leu | Ser | Pro | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7  
(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37  
(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu  
1 5 10 15  
Ile Arg Ser Ser Asn Asn Leu Gly Pro Val Leu Pro Pro Thr Asn Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids  
(B) TYPE: amino acid  
(C) STRANDEDNESS: single  
(D) TOPOLOGY: linear

## (ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7  
(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37  
(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Thr Asn Phe Leu  
1 5 10 15  
Val His Ser Ser His Asn Leu Gly Ala Leu Leu Pro Thr Asp Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

*a<sup>1</sup>  
cont.*

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Thr Asn Phe Leu  
1 5 10 15  
Val His Ser Ser His Asn Leu Gly Ala Ala Leu Ser Pro Thr Asp Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 36 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Thr | Asn | Phe | Leu | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| His | Ser | Ser | His | Asn | Leu | Gly | Ala | Ala | Leu | Pro | Ser | Thr | Asp | Val | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 37 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Thr | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| Val | Arg | Ser | Ser | His | Asn | Leu | Gly | Ala | Ala | Leu | Ser | Pro | Thr | Asp | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |



(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

```
(ix) FEATURE:
 (B) LOCATION: 2,7
 (D) OTHER INFORMATION: disulfide bridge between
 the Cys residues
 (B) LOCATION: 37
 (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)
```

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Thr Asn Phe Leu  
1 5 10 15  
Val Arg Ser Ser His Asn Leu Gly Ala Ile Leu Pro Pro Thr Asp Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

```
(ix) FEATURE:
 (B) LOCATION: 2,7
 (D) OTHER INFORMATION: disulfide bridge between
 the Cys residues
 (B) LOCATION: 37
 (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)
```

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

Lys Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Thr Asn Phe Leu  
1 5 10 15  
Val Arg Ser Ser His Asn Leu Gly Pro Ala Leu Pro Pro Thr Asp Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:28

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 25 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 25
- (D) OTHER INFORMATION: amidated Pro (Prolinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

Val Leu Gly Lys Leu Ser Gln Glu Leu His Lys Leu Gln Thr Tyr Pro  
1 5 10 15  
Arg Thr Asn Thr Gly Ser Gly Thr Pro  
20 25

(2) INFORMATION FOR SEQ ID NO:29

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

Lys Asp Asn Thr Ala Thr Lys Ala Thr Gln Arg Leu Ala Asn Phe Leu  
1 5 10 15  
Val His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val  
20 25 30  
Gly Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:30

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

Cys Asn Thr Ala Thr Cys Ala Thr Gln Arg Leu Ala Asn Phe Leu Val  
1 5 10 15  
His Ser Ser Asn Asn Phe Gly Ala Ile Leu Ser Ser Thr Asn Val Gly  
20 25 30  
Ser Asn Thr Tyr  
35

(2) INFORMATION FOR SEQ ID NO:31

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | His | Ser | Ser | Asn | Asn | Phe | Gly | Ala | Ile | Leu | Ser | Ser | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:32

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

*a' cont*

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ser | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | His | Ser | Ser | Asn | Asn | Phe | Gly | Ala | Ile | Leu | Ser | Ser | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:33

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

- (B) LOCATION: 2,7
- (D) OTHER INFORMATION: disulfide bridge between  
the Cys residues
- (B) LOCATION: 37
- (D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

*a' cont.*

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | His | Ser | Ser | Asn | Asn | Phe | Gly | Ala | Ile | Leu | Ser | Pro | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:34

(i) SEQUENCE CHARACTERISTICS:

- (A) LENGTH: 37 amino acids
- (B) TYPE: amino acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 2,7

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 37

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Lys | Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Val | His | Ser | Ser | Asn | Asn | Phe | Gly | Pro | Ile | Leu | Pro | Ser | Thr | Asn | Val |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gly | Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |

(2) INFORMATION FOR SEQ ID NO:35

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 36 amino acids

(B) TYPE: amino acid

(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: protein

(ix) FEATURE:

(B) LOCATION: 1,6

(D) OTHER INFORMATION: disulfide bridge between  
the Cys residues

(B) LOCATION: 36

(D) OTHER INFORMATION: amidated Tyr (Tyrosinamide)

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Cys | Asn | Thr | Ala | Thr | Cys | Ala | Thr | Gln | Arg | Leu | Ala | Asn | Phe | Leu | Val |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     |     | 15  |     |
| His | Ser | Ser | Asn | Asn | Phe | Gly | Pro | Ile | Leu | Pro | Ser | Thr | Asn | Val | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Asn | Thr | Tyr |     |     |     |     |     |     |     |     |     |     |     |     |
|     |     |     | 35  |     |     |     |     |     |     |     |     |     |     |     |     |